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Carter & Burgess
Categorical
exclusion for STPS
271-1(5)5 five
miles north of
Drummond-north
secondary 271,

CATEGORICAL EXCLUSION
for
STPS 271-1 (5) 5

Five Miles North of Drummond-North
Secondary 271
Granite County, Montana
Control No. 2975

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Submitted Pursuant to:

23 CFR 771.117(d)
and
ARM 18.2.261 Sections 75-1-103 and 75-1-201, MCA

Submitted By:

CARTER & BURGESS, INC.
for the
MONTANA DEPARTMENT OF TRANSPORTATION

August 1996

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CATEGORICAL EXCLUSION
for
STPS 271-1 (5) 5

Five Miles North of Drummond-North
Secondary 271
Granite County, Montana
Control No. 2975

Submitted Pursuant to:

23 CFR 771.117(d)
and
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CE Concurrence Request Letter to Jerry J. Cloud, FHWA

August 16, 1996

Mr. Jerry J. Cloud, Acting Division Administrator
Federal Highway Administration (FHWA)
301 So. Park, Drawer 10056
Helena, MT 59626

Subject: STPS 271-1 (5) 5
Five Miles North of Drummond-North
Control No. 2975

This is a request for the FHWA's concurrence that this proposed project qualifies as a Categorical Exclusion under the provisions of 23 CFR 771.117(d). This proposed action also qualifies as a Categorical Exclusion under the provisions of ARM 18.2.261 (Sections **75-1-103** and **75-1-201, M.C.A.**). See Figure 1 for Regional map.

The proposed project involves improvements to a 3.83-kilometer (2.38-mile) segment of Secondary 271. This proposed project consists of two basic elements. The first is the resurfacing of the existing gravel roadway with plant mix. The second element entails the reconstruction and realignment of two horizontal curves within the segment. A finished surface width of 7.2 meters (24 feet) is proposed to place this overlay on the existing 8.5-meter (28-foot) gravel surface. Safety enhancement work will include upgrading the existing guardrail to current standards and installing new guardrails where slope flattening is not feasible. The project will also include signing, striping, and slope flattening where possible as well as providing a new, smoother driving surface. Approximately 0.04 hectares (0.10 acres) of new right-of-way from private properties will be required.

The location of this project is Secondary 271 in Granite County, north of Drummond (see Figure 2 for Area Map). The project begins at km 7.9 (MP 4.90), approximately 5.47 kilometers (3.4 miles) north of Interstate 90, and extends north approximately 3.83 kilometers (2.38 miles) to the Powell and Granite County line at km 11.72 (MP 7.28). The proposed project has been designed with the intent to avoid encroachment onto Bureau of Land Management lands to the extent possible. Land administered by the US Department of the Interior, Bureau of Land Management, Garnet Resource Area is located in the NE 1/4 of Section 22, Township 11 North, Range 12 West.

The intent of this project is to improve the roadway surface and to improve operational and safety characteristics.

Section 1: Impact Areas With No Adverse Effect

This proposed project has been evaluated for, and does not have any adverse effect on the following environmental areas of concern:

Historical/Cultural Resources	Prime and Unique Farmlands
Changes in Land Use	USDOT - 4(f)/NL&WCF - 6(f) Act
T&E Species	Air Quality
Utilities	Social/Economic/ Environ. Justice (E.O. 12898)
Hazardous Waste	Floodplains

Air Quality - This proposed project is located in an "unclassifiable"/attainment area of Montana for air quality under 40 CFR 81.327, as amended. As such, this proposed project is not covered under the U.S. Environmental Protection Agency s **Final Rules** of November 24, 1993 on Air Quality conformity. Therefore, this proposed project complies with Section 176(c) of the *Clean Air Act* as amended **42 U.S.C. 7521(a)**.

Historical/Cultural Resources - A Cultural Resources Inventory Report was prepared by a Cultural Resources consultant. No National Register of Historic Places (NRHP) eligible sites were located in the project area. The Montana State Historic Preservation Office (SHPO) has concurred with this assessment in a letter dated May 30, 1996. A copy of the SHPO s letter is contained in Appendix B - Agency Correspondence. A copy of the Cultural Resource Inventory Report was sent to the BLM. See transmittal letter dated June 19, 1996 in Appendix B - Agency Correspondence.

Changes in Land Use - This project will not induce substantial land use changes or promote unplanned growth. There will be no substantial effects on access to adjacent properties or present traffic patterns.

Social/Economic/Environmental Justice - The proposed project will not affect, separate, or isolate any distinct neighborhoods, low income groups, ethnic groups, or other specific groups of people. No displacements or relocations will be caused by the project. Therefore this project is in compliance with E.O. 12898 concerning environmental justice. A short-term benefit that may be derived from this project is employment for some area residents during construction.

USDOT - 4(f)/NL&WCF - 6(f) Acts - The proposed project will not require the use of any publicly owned land from a public park, recreational area, wildlife and waterfowl

refuge lands or historic sites, therefore a 4(f) statement will not be required. No Land and Water Conservation Funds have been used on this property, therefore no 6(f) impacts will result from project implementation.

Hazardous Waste - A field review conducted by the Montana Department of Transportation, Hazardous Waste Section on February 27, 1996 found no evidence of any hazardous waste within the study area. This project is not expected to generate or encounter hazardous waste. A statement of "No Impact" can be found in Appendix A - Agency Correspondence.

Prime and Unique Farmlands - The U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) has identified no Prime Farmlands adjacent to, or within this proposed project. This is shown on the NRCS soil maps for Granite County. Since no Prime Farmlands will be impacted, a NRCS Farmland Conversion Impact Rating Form (#AD-1006) will not need to be completed for this project.

Floodplains - Based on Flood Insurance Rate Maps printed by the Federal Emergency Management Agency (FEMA) for Granite County, this project will not encroach on any delineated floodplains. Granite County administers floodplains for FEMA, and a Floodplain Development Permit will not be required for this project.

This proposed project will not promote or encourage development within any delineated floodplains, nor increase flood liability hazards from it' s construction. This proposed project is therefore considered to be in compliance with E.O. #11988.

Threatened/Endangered Species - The U.S. Department of the Interior's Fish & Wildlife Service (USF&WS) was contacted for identifying Federally-listed Threatened/Endangered Species under *Section 7(a) of the Endangered Species Act* (**16 U.S.C. 1531 - 1543**). The following Threatened/Endangered Species were identified by the USF&WS, the Bureau of Land Management (BLM) and the **Biological Resource Report** (see Attachment 1) as being in the vicinity of this proposed project:

> The bald eagle *(Haliaeetus leucocephalus)* is a threatened raptor species in Montana
> The peregrine falcon *(Falco peregrinus)* is an endangered raptor species in Montana.

It is recommended that impact to riparian and wetland areas, potential foraging habitat for both species, be minimized. In addition, the removal of carcasses from along the roadway

would reduce the risk of fatalities for foraging raptors. This project is not likely to adversely affect either the bald eagle or the peregrine falcon.

Utilities - There may be telephone utility involvement as part of this project.

Section 2: Impact Areas With Minor Effect

The proposed project will have a minor effect on the following environmental areas:

Stormwater Runoff - Additional impervious surfaces totaling approximately 4,523 square meters (50,266 square feet) will be constructed for the proposed project. Due to the relatively small amount of impervious surface added as part of this project, as well as comparatively low projected average daily traffic volumes, the increase in surface runoff for this proposed project is expected to be insignificant.

Wetlands/Section 404 Clean Water Act - A total of 0.4 hectares (1.0 acres) of wetlands will be subject to unavoidable impacts of this project. It is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. A full description of wetland impacts is provided in the Wetlands Finding, included as part of the Biological Resource Report in Attachment 1 of this document.

Stream Preserv./Water Quality - Within the project limits, Secondary 271 parallels and crosses Morris Creek. The proposed project will include two short channel modifications to the adjacent Morris Creek. There may be some sedimentation which could occur as a result of construction activities however, the implementation of standard procedures found in the MDT Highway Construction Standard Erosion Control Work Plan will alleviate impacts associated with sedimentation.

Noise - An initial noise impact assessment conducted by MDT indicates that Design Year Noise levels will not increase substantially (10 dbA or greater) over the existing levels, and will therefore not exceed the Noise Abatement Criteria (23 CFR Part 722). See Helm memo dated 12/6/95 in Appendix A - Agency Correspondence. There will be minor, temporary noise impacts during the construction phase of this project. Overall, traffic noise level increases will be insignificant with the construction of this project.

Section 3: Permits Required

Permits Required - The following permits will be acquired prior to any relevant disturbance:

This proposed project will be in compliance with the provisions for both Water Quality under **75-5-401(2) M.C.A.** for *Section 3(a)* authorizations, and Stream Protection under **87-5-501** through **509 M.C.A.**, inclusive.

A ***124SPA** Stream Protection* Permit will be required by the MDFW&P.

This proposed project will require the following permits under the *Clean Water Act* (**33 U.S.C. 1251 - 1376**):

A *Section 402*/Montana Pollutant Discharge Elimination System permit from the Montana Dept. of Environmental Quality, Water Quality Division.

A *Section 404* permit from the U.S. Army - Corps of Engineers. The COE will determine if this proposed project qualifies for a "Nationwide" 404 permit under the provisions of **33 CFR 330**.

All work will also be in accordance with the *Water Quality Act* of 1987 (**P.L. 100-4**), as amended.

An Erosion Control Plan will be submitted to the Montana Department of Environmental Quality, Water Quality Division in compliance with their Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.1314) for this proposed project.) Best Management Practices will be included in the design of this Plan using guidelines as established in MDT's Highway Construction Standard Erosion Control Work Plan. The objective is to minimize erosion of disturbed areas during and following construction of this proposed project.

In accordance with **7-22-2152,** and **60-2-208 M.C.A.**, MDT will re-establish a permanent desirable vegetation community along all areas disturbed by the proposed construction. A set of revegetation guidelines will be developed by MDT that must be followed by the contractor. These specifications will include instructions on seeding methods, seeding dates, types and amounts of mulch and fertilizer, along with seed mix components. Seed mixes include a variety of species to assure that areas disturbed by construction are immediately stabilized by vegetative cover. The Seeding Special

Provisions developed for this proposed project will be forwarded to the Granite County Weed Board for approval.

Cooperating Agencies - This proposed project may cross land administered by the US Department of the Interior, Bureau of Land Management (BLM), Garnet Resources Area located in the NE 1/4 of Section 22, Township 11 North, Range 12 West near the southern end of this project. In accordance with 23 CFR 771.111(d), the BLM was requested to be a Cooperating Agency. Correspondence from the BLM was received confirming their administration of this land, and their desire to be considered a Cooperating Agency. A copy of the Draft Categorical Exclusion for this proposed project was sent to the BLM for their review and comment. The BLM had no specific comments on the document. See Ledger letter dated 8/6/96 in Appendix A - Agency Correspondence.

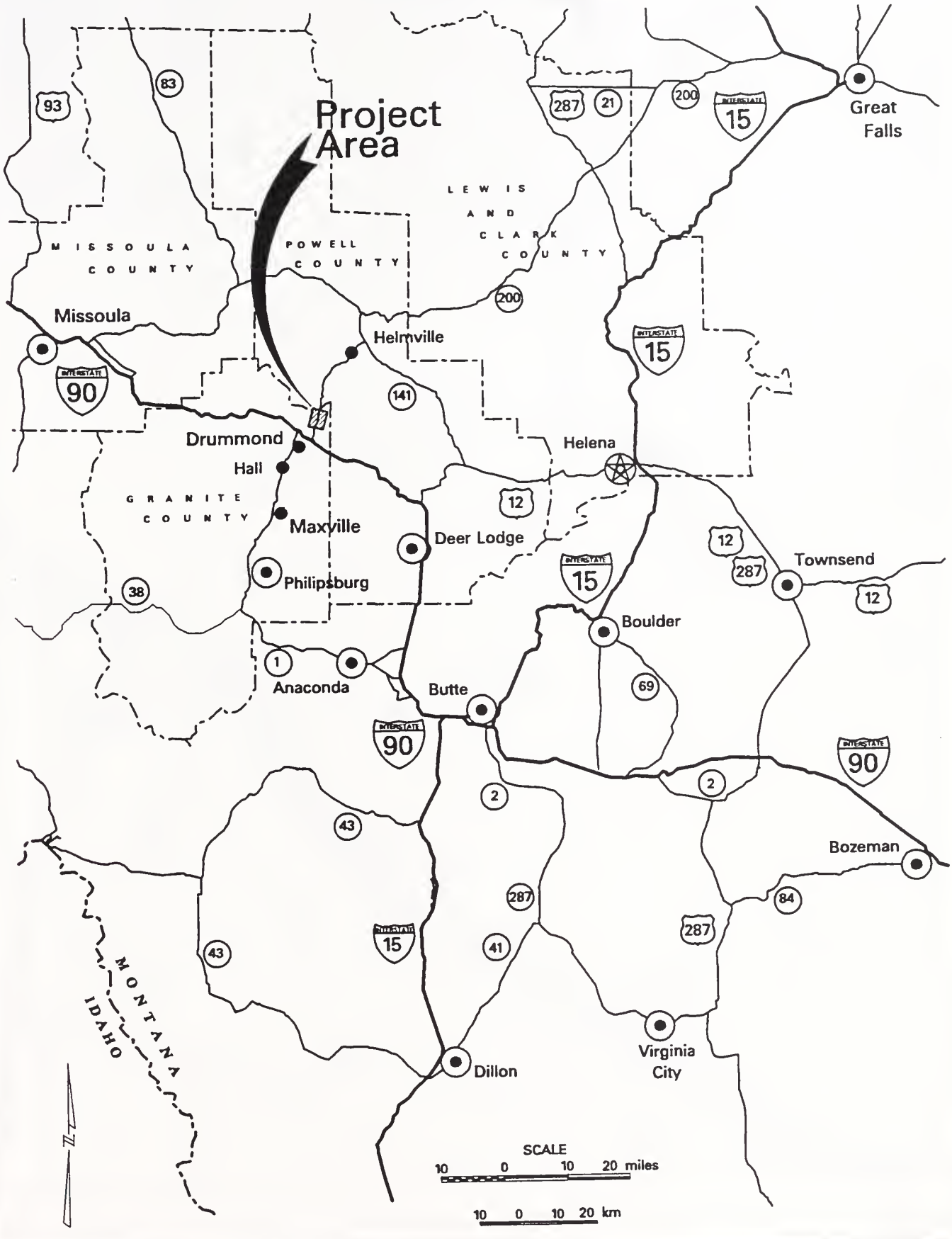
Americans With Disabilities Act - Not applicable to this project.

A total of approximately three construction permits totaling 0.18 hectares (0.43 acres) will be required for this project.

A news release will be submitted to the local newspaper.

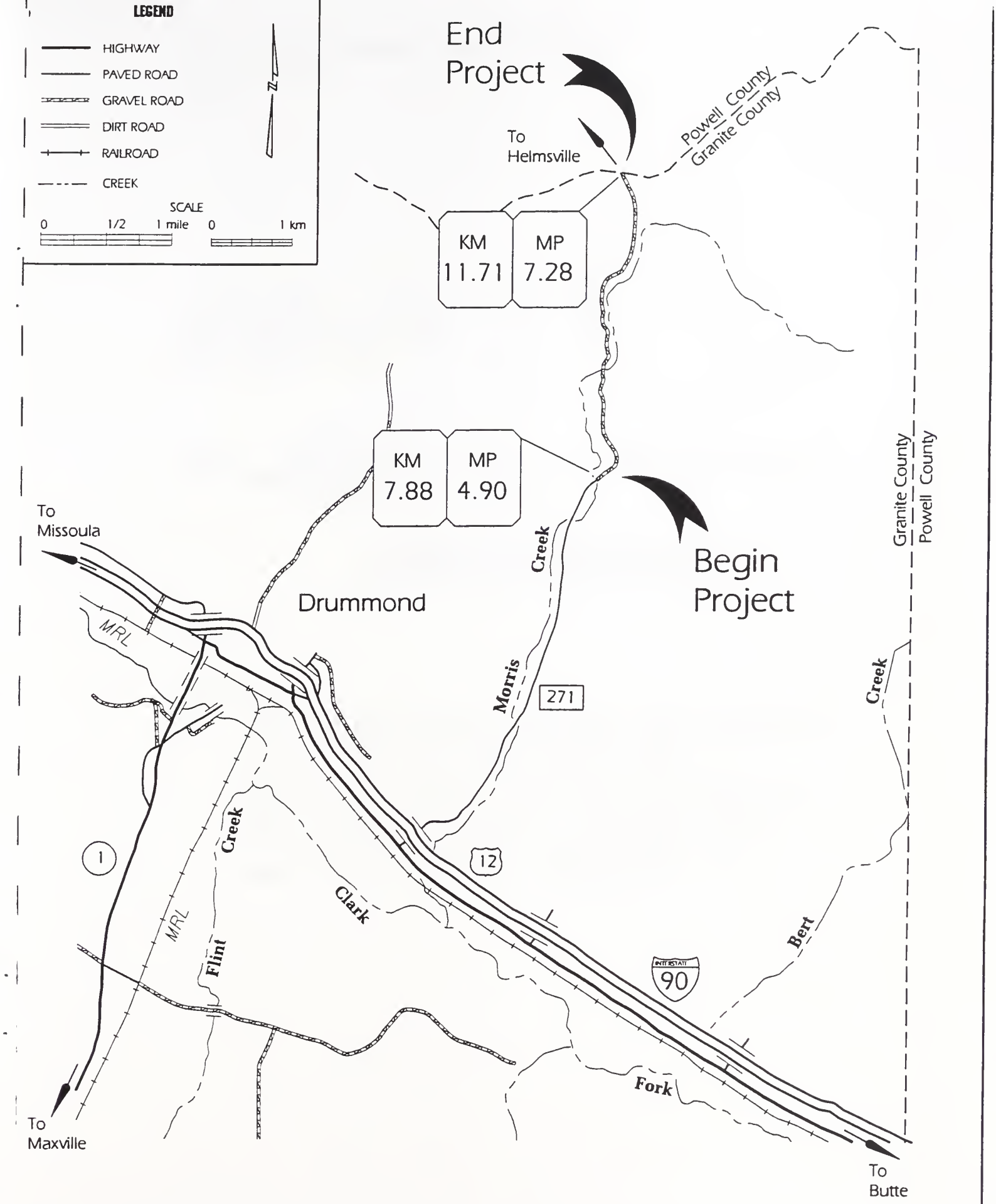
MDT currently has two proposed projects in this part of its Missoula District (No. 1) not including this proposed project. The nearest project is IR 90-3 (66) 150, Drummond East and West, Control No. 1422. It is an overlay project located approximately 5.5 kilometers (3.4 miles) south of this proposed project. No cumulative impacts will result due to the distance from this proposed project. The second project is RTS 271-1(6)0, Drummond E&N. It is an overlay project which begins at kilometer 0.0 (MP 0.0) in Drummond and extends east and north to kilometer 7.88 (MP 4.9), the beginning of 5 Miles North of Drummond-North. Drummond E&N will not be constructed concurrently with the proposed project and will therefore cause no cumulative impacts. Therefore, none of these MDT projects will have any significant cumulative environmental impacts on this proposed action. This proposed new construction and reconstruction project will also have no significant cumulative environmental impacts on these other MDT projects in this part of its Missoula District (No. 2).

Construction of this proposed project will not have any significant air or water quality impacts. This proposed project is also in accordance with the provisions of 23 CFR 771.117(a). Therefore, the FHWA's concurrence is requested that this proposed project qualifies as a Categorical Exclusion under the provisions of 23 CFR 771.117(d).



Drummond North

REGIONAL MAP
Figure 1



Drummond North

AREA MAP
Figure 2

Joel M. Marshik, P.E., Manager
Environmental Services

Concur _____ Date 8-22-96
Federal Highway Administration

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

JMM:GS:jl

Attachments
cc: James Weaver, P.E., District Administrator - MDT Missoula District
Carl S. Peil, P.E. - MDT Preconstruction Engineer
Thomas E. Martin, P.E., Chief, MDT Right-of-Way Bureau
David W. Jensen, Supervisor - MDT Fiscal Programming Section
Mark A. Wissinger, P.E., Supervisor - Contract Plans Section
Joel M. Marshik, P.E., Manager - Environmental Services
Jeanette Lostracco, AICP, Carter & Burgess, Inc.

Appendix A - Agency Correspondence

COPY

Montana Department of Transportation
Helena, Montana 59620-1001

Memorandum

To: Karl M. Helvik, P.E., Supervisor
Environmental Engineering Section

From: Cora G. Helm, Hazardous Waste Section
Environmental Services

Date: February 27, 1996

Subject: HAZARDOUS WASTE ASSESSMENT
STPS 271-1(5)5
5 Mi. N of Drummond-North
CN 2975

This project proposes to reconstruct a short stretch of roadway and will include reconstructing two curves and improving safety. A field review was conducted February 27, 1996 to identify any possible hazardous waste concerns along the project. The project area is rural and in the vicinity of a mining district. The field review did not identify any mine tailings in the roadbed or adjacent to the roadway. We conclude this project will neither generate nor encounter hazardous waste. Let this serve as a statement of "No Impact" with regards to hazardous waste.

CGH:env

cc: Jeanette Lostracco, Carter & Burgess

MASTER FILE
COPY

Montana Department of Transportation
Helena, Montana 59620-1001

Memorandum

To: Karl M. Helvik, P.E., Supervisor
Environmental Engineering Section

From: Cora G. Helm, Hazardous Waste Section CGH

Date: December 6, 1995

Subject: NOISE ASSESSMENT REPORT
STPS 271-1(5)5
Drummond - North
CN 2975

The proposed highway project involves reconstruction of the roadway and flattening of 2 curves. Due to low traffic volume, low vehicle speed and rural location, a detailed noise analysis is not required. An initial noise impact assessment indicates that Design Year noise levels will neither increase substantially (10 dBA or greater) over the existing levels; nor will Design Year noise levels exceed the Noise Abatement Criteria (23 CFR Part 772). Traffic noise level increases will be insignificant with the construction of this project.

cgh:env

cc Jeanette Lorraine CTB

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Garnet Resource Area
3255 Fort Missoula Road
Missoula, Montana 59801-7293

IN REPLY TO:

2800

MAR 2 8 1996

Jeanette Lostracco
Carter & Burgess, Inc.
216 16th Street Mall
Denver, CO 80202

Dear Ms. Lostracco:

This is in response to your letter of March 18, 1996 regarding State Secondary Road 271 - Drummond North Project STPS 271-1(5)5, Control No. 2975. A review of the Scope of Work Report shows that lands administered by the Bureau of Land Management (BLM) in the NE¼ of Section 22, T. 11 N., R. 12 W., are involved in the proposed project.

Since It is our desire to review the draft environmental document for this project, we would like to be considered a cooperating agency as provided for in 23 CFR 771.111(d).

The BLM administered lands involved in this project are not used and/or designated under the criteria applicable for Section 4(f) lands. This is conditioned, however, on the results of the pending cultural resources survey.

If we can provide additional information for this project please let us know; our Realty Specialist, Jim Ledger, is available at (406) 329-3914.

Sincerely,

W. DeLon Potter
Acting Area Manager

Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

May 23, 1996

MASTER FILE COPY

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ENVIRONMENTAL

MAY 27 1996

GR 40 03 06 03

Stan Wilmoth
Historic Preservation Officer
Montana Historical Society
1410 East 8th Avenue
P.O. Box 201202
Helena, MT 59620

Subject: 5 Miles North of Drummond North
STPS 271-1(5)5
Control Number 2975

Enclosed for your review and comment is a cultural resource report prepared by Ethnoscience for the above Montana Department of Transportation (MDT) project.

No prehistoric or historic properties were located in the project's area of potential effect.

We ask that you concur with the report's methods and recommendations.

If you have any questions, please call me at 444-0455.

NO PROPERTIES ON OR ELIGIBLE FOR NRHP APPEAR LIKELY TO EXIST WITHIN PROJECT IMPACT AREA
MONTANA SHPO
DATE 5-30-96 SIGNED

Steve Platt, Archaeologist
Environmental Services

cc: Gordon Stockstad, Supervisor Resources & Permitting

Post-it® Fax Note 7671	Date 6/24/96	# of pages ▶ 1
To Jeanette Lastracco	From Steve Platt	
Co./Dept. Carter-Burgess	Co. MDT	
Phone #	Phone # 444-0455	
Fax # 303-820-2401	Fax #	

An Equal Opportunity Employer

Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

June 19, 1996

Darrell Sanders
Butte District Office
Bureau of Land Management
106 North Parkmont
P.O. Box 3388
Butte, MT 59702-5059

Subject: 5 Miles North of Drummond North
STPS 271-1(5)5
Control Number 2975

Enclosed is a copy of a cultural resource inventory report prepared by Ethnoscience for the above Montana Department of Transportation (MDT) project.

A small parcel of BLM land exists in the survey corridor in the NE¼ of Section 22, T. 11 N., R. 12 W.. No prehistoric or historic sites were located within the project's area of potential effect. Montana SHPO concurred on the adequacy of the inventory on 5/30/96.

If you have any questions, please call me at 444-0455.

Steve

Steve Platt, Archaeologist
Environmental Services

cc: Gordon Stockstad, Supervisor Resources & Permitting
Jeanette Lostracco, Carter-Burgess, Inc.

An Equal Opportunity Employer

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Garnet Resource Area
3255 Fort Missoula Road
Missoula, Montana 59801-7293

IN REPLY TO:

AUG 0 6 1996

2800

Jeanette Lostracco
Carter & Burgess, Inc.
216 16th Street Mall
Denver, CO 80202

Dear Ms. Lostracco:

Thank you for the opportunity to review the draft categorical exclusion document for the State Secondary Road 271 - Drummond North Project, STPS 271-1(5)5, Control No. 2975.

We have no specific comments to offer as the document adequately addresses effects on the BLM administered lands within the project.

If we can provide additional information for this project please let me know.

Sincerely,

James B. Ledger
Acting Area Manager

Attachment 1 - Biological Resource Report

Drummond North
Biological Resources Report

Executive Summary

The Montana Department of Transportation's **North of Drummond** project proposes to partially reconstruct and fully surface a 3.8 kilometer (2.38 mile) segment of Secondary Highway 271 connecting the communities of Helmville and Drummond. Presently a graveled, two-lane facility beyond Km 7.89 (milepost 4.9), the road would receive constructed improvements to several substandard horizontal curves in the vicinity of Km 8.53 (MP 5.3). The finished width of 7.21 meters (24 ft.) would consist of a plant mix overlay. The road was originally constructed in 1949 which involved the straightening of Morris Creek to permit vehicular passage.

This report focuses on area resources along the project portion of Morris Creek as well as the environmental impacts expected from implementation of the proposed action. This project is **not likely to adversely affect** the endangered peregrine falcon, the threatened bald eagle, or their associated habitats nor any of the other ten federally-listed species within Montana. The Biological Assessment does mention, however, the need to minimize losses both within riparian foraging habitats and small wetland inclusions, as well as the raptor-proofing of any eventual utilities work. The project is not expected to substantially affect area wildlife, fisheries, nor any of the sensitive plant or animal Species of Concern found elsewhere in the corridor.

Since several noxious weeds such as common houndstongue, spotted knapweed, and mullein are present in the general area, prompt revegetation of disturbed sites will be important in preventing further infestations. Of equal importance is the need for the protection of water quality within Morris Creek throughout all phases of planning and construction, where MDT's use of best construction practices is expected to address such concerns. Lastly, the report reveals a 0.4 hectare (1.0 ac.) loss of low function and value wetland for the project.

Introduction

The Montana Department of Transportation's **North of Drummond** project proposes to partially reconstruct and surface a 3.8 kilometer (2.38 miles) section of Secondary Road 271 connecting the towns of Helmville and Drummond. The following report discusses the terrestrial and aquatic resources present in this project's vicinity as well as the possible impacts from proposed construction activities. This report is based upon a field survey conducted on April 30th, 1996, correspondence and consultation with both state and federal agencies, and a review of pertinent literature.

General Area Description

Defined as the Morris Creek drainage just north of Interstate 90 and the community of Drummond, the canyon is but one of several comprising this southern face of the Garnet Range. It is, however, the only one to provide a passage to Helmville some 29 km (18 mi.) to the north.

The route's general terrain upon leaving the Clark Fork River corridor evolves from low foothills to the sizeable rock formations of Limestone Ridge and beyond to broad montane basins near the juncture of Powell and Granite Counties, or project terminus.

Hillsides are predominately a mosaic of conifers and sagebrush, with deciduous species more confined to area creeks and draws. Small pockets of sedge-dominated wetlands also occur in association with Morris Creek. The reconstructed portion of the project would occur at the road's narrowest stricture within Limestone Ridge where vertical rock walls to 10 m (30 feet) limit the presence of vegetated habitats along the immediate roadside. Aside from Secondary Road 271, the canyon shows little development other than a few residences below the project and a very noticeable use by livestock.

The project involves no lands with either (4)f or 6(f) classification under the Land and Water Conservation Fund Act, nor would any unique land or aquatic resources be affected by the proposed action.

Project Description

Beginning approximately 5.47 km (3.4 mi.) north of Interstate 90, the project will affect 3.8 kilometers (2.38 mi.) of mentioned Secondary 271. Recently reported as having an ADT of 120 vehicles, the facility currently consists of an approximate 8.5 meter (28 ft.) width of graveled surface which has seen little improvement since first constructed in 1949. An exception to this is the lower portion from Km 2.7 to 7.9 (mileposts 1.7 to 4.9) which was paved in 1989 under project S36(1). As built, the roadway possesses numerous sharp horizontal curves as well as several vertical curves approaching ten percent.

The project, with its 48 kph (30 mph) design speed, proposes to improve upon the worst of these curves through reconstruction from Stations P62+20 to P64.46, or approximately Km 8.5 to 8.9 (MP 5.3 to 5.5). Such work would also necessitate two short channel modifications to adjacent Morris Creek, some minor slope flattenings,

and the extensions of several existing cross-drains (CMPs). There are no bridge crossings of Morris Creek within the project. Surfacing of the entire 3.8 km (2.38 miles) would consist of recycled plant mix millings salvaged from a nearby Interstate project to provide a finished top width of 7.2 m. (24 ft.). Additional safety improvements are to include new guardrail, signs, and striping.

No utilities involvement is anticipated for this project, however additional right-of-way will be required within the reconstructed section. Due to the confines of terrain, design exceptions are still being anticipated for horizontal alignment, ditch sections, clear zone widths, and possibly grades.

Terrestrial Resources

Methods

Literature reviews and agency consultations pertaining to endangered, threatened, and sensitive wildlife, fish, herptiles, and vegetative species were conducted with the US Fish and Wildlife Service (USFWS), Montana Department of Fish, Wildlife, and Parks (MDFWP), U. S. Bureau of Land Management (BLM), and the Montana Natural Heritage Program (MNHP). A query of the Montana Rivers Information System (MRIS, 1995) was also conducted for the fisheries of Morris Creek.

The field survey was conducted on 30 April, 1996 by extensively walking and driving the project area. Vegetation communities, wetlands, wildlife, and fisheries resources were evaluated, as was the utilization of habitats. Reporting of wetlands is provided under a separate Wetland Finding.

Existing Wildlife Habitat/Vegetation

Native plant communities immediately along the creek and road are frequently sparse albeit riparian in nature. They commonly include such species as streambank and lesser willows, red-osier dogwood, a few scattered quaking aspen, woods rose, gooseberry, and red raspberry as well as sedges and a few bluegrasses. Non-native species include introduced smooth brome and an occasional wheatgrass, in addition to such weedy species as houndstongue, spotted knapweed, and flannel-leaved mullein.

Those hillsides with a northwesterly exposure, as they rise from the creek, are vegetated in mixed age stands of Douglas fir interspersed with Rocky Mountain and common juniper. Opposing hillsides having south and east exposures possess a greater number of junipers than Douglas fir within a much more open canopy. The open

expanses, or basins, to appear near the end of the project are a mix of big-leafed sagebrush and native grasses and forbs intertwined with small area creeks.

Wildlife

Montane habitats of the Garnet Range host a fairly diverse array of wildlife. Large carnivores of the general area commonly include coyote, black bear, mountain lion and bobcat. The gray wolf and grizzly bear once historic to the area are presently considered transitory and rare. Area ungulates are comprised of mule and white-tailed deer, Rocky Mountain elk, and occasionally moose.

Perhaps the broadest user group is the neotropical (song)birds which seasonally occupy conifered habitats and what riparian cover is found within the canyon. Sustained by a large variety of vegetation and insect life, songbird species are far too numerous to list.

Area raptors show a corresponding diversity given the abundance of prey. Sightings have included bald and golden eagles, turkey vultures, peregrine falcons, osprey, large buteo hawks such as red-tailed, rough-legged and Swainson's, occasional accipiters, and small falcons such as American kestrels and merlins.

Apparently absent and unnoticed during the field survey was the presence of furbearers such as beaver, muskrat, and possibly mink along project portions of the creek, a condition likely affected by the stream's periodic intermittency. Observed, however, at that time were a few mallard and American wigeon ducks loafing on small ponds immediately north of the project.

The unseasonably cold spring survey precluded any sightings of the various reptiles and amphibians suspected to occur along Morris Creek.

Plant and Animal Species of Concern

Species considered in this section are designated as rare, sensitive, or species of concern by the BLM, MNHP or MDFWP. All species so designated are not necessarily considered to be threatened or endangered as listed by USFWS under the Endangered Species Act, although some may be considered as candidates for such listing.

Plant Species

Although MNHP elemental occurrence records detail the presence of Missoula phlox in neighboring Powell County and sporadic occurrences of Nuttall's Townsend daisy for lower elevations east of Drummond, neither species are suspected to occur within the project area. No additional sensitive plants were observed at the time of survey nor are any known to occur by agency personnel. This condition could also be influenced in part by the level of human disturbance already visited upon the site during previous road constructions, creek berming operations, etc. At present, it is unlikely that suitable habitats exist within the immediate construction corridor that would support those sensitive species infrequently found elsewhere in the general area. Accordingly, no special mitigation/coordination measures are being recommended for sensitive plant species during the period of construction.

Wildlife Species

Various literature searches and agency consultations suggest that no sensitive wildlife species of concern would be affected by the proposed action. Although certain rare birds and possibly some uncommon bats may transit the project vicinity, no resident populations are presently documented or suspected within the immediate area (Flath, pers. comm.). Neither are suitable or historic habitats for the peregrine falcon likely to occur within many miles of the project. The nearest recorded sensitive species population is for that of the Columbian sharp-tailed grouse found immediately south of Helmville.

Upon consideration of the available information and project scope, no special mitigation/coordination measures are recommended at this time, aside from those mentioned for the protection of threatened and endangered species (ref. Biological Assessment).

Potential Impacts to Terrestrial Resources

Plant Species/Communities

Impacts to scattered riparian clumps will likely occur within the 300-m (990-foot) segment of reconstruction, where such small losses are not considered to be substantial in light of the already sparse nature and low function of cover. Regardless, avoidance and minimization of impacts to riparian thickets is important during both the design and construction phases in order to preserve what little habitat function remains.

Ground disturbances could also result in the spread of such noxious weeds as flannel-leaved mullein, houndstongue, spotted knapweed, and possibly, Canada thistle. New weed species may also invade, as seed sources are often conveyed to the site by "out-of-town" equipment. Prompt revegetation should minimize such impacts, as would a noxious weed management plan providing mitigative measures in the event of an outbreak. Presently, MDT is coordinating with the Granite County Extension Services Office to develop such plans as a result of State H.B. 395.

Wildlife Species

Small reductions in riparian cover will cause minor displacement of various birds and small mammals to adjacent habitats; adjoining habitats may experience similar short-term displacements for the period of construction only. The minimization of riparian impacts would also benefit several wildlife user groups. Although both mule and white-tailed deer frequent the canyon, their vehicle-related mortality is considered minimal and of little concern at this time.

Aside from physical loss of habitat, wet-site construction activities have the potential to further impact aquatic dependent populations through the degradation of water quality. The Department's use of best construction practices for this project is expected to minimize the possibility of further impacts to area fish, herptiles, macroinvertebrates, etc.

Fisheries

Queries of MRIS and MDFWP's area fisheries biologist, Wayne Hadley, reveals little collected data for the fisheries of Morris Creek. Once a viable, if small, tributary of the upper Clark Fork, the stream now suffers substantial impacts from overgrazing, irrigation demands, and the eradication of many meanders during original road construction in 1949. This past channelization of the creek is partially suspected of promoting the frequent intermittency experienced between mileposts 5 and 6, where flows seasonally disappear only to resurface below the canyon; and may also be abetted by the porosity of limestone that lies beneath portions of disturbed creekbed. This annual condition is corroborated by the absence of macroinvertebrates (nymphs) within the stream's cobble as noted during the April field visit when flows were estimated at 3 to 4 cfs. over the 1 to 2 m (3.3 to 6.6 feet) width.

Morris Creek is believed to support a small, somewhat isolated population of pure strain Westslope cutthroat trout in the more perennial, meadow-like reaches upstream of the project (as does nearby Douglas Creek). The likelihood of fluvial fish migrating

from the main river into Morris Creek is now considered remote due to irrigation draw-downs and cumulative livestock impacts. And where nearest the road, the creek has been further impacted by occasional berming operations undertaken for its containment during periods of winter flooding. Most riparian areas, to include the creek, also exhibit a considerable amount of litter such as food packagings and plastic pop containers.

Sensitive Species of Concern

The mentioned Westslope cutthroat trout is the only sensitive fish species common to this project with its state ranking of S3. There is some speculation that one additional species, the bull trout, may have occurred in such area drainages, yet there is no data to suggest the presence of bull trout in Morris Creek at this time.

Fisheries Impacts

The project proposes a few short sections of channel change in order to improve several horizontal curves. These shifts, because they occur to portions of the creek most impacted by past construction, should have no impacts for area fisheries (i.e. straightened sections approaching 10 percent gradient). The proposed changes might possibly even improve present conditions by shifting the present flow away from the road. And any reductions in stream velocity from such changes would also benefit aquatic organisms, as would construction avoidance of those few meanders to remain. MDT's use of best construction practices is expected to address the importance of water quality throughout the design and construction of this project.

Biological Assessment

This Biological Assessment has been prepared for MDT's Section 7(a) compliance with the Endangered Species Act. The Department will review the assessment and coordinate as necessary with USFWS. Potential impacts to endangered and threatened species resulting from the proposed action are as follows:

Twelve species within Montana have been classified by USFWS as either threatened or endangered. Endangered species include the gray wolf, peregrine falcon, whooping crane, black-footed ferret, Interior least tern, pallid sturgeon, and white sturgeon. The grizzly bear, bald eagle, piping plover, and two plant species, water howellia and Ute ladies' tress orchid, are presently listed as threatened.

The Interior least tern, black-footed ferret, whooping crane, piping plover, pallid sturgeon, white sturgeon, water howellia, and Ute ladies' tress orchid, or their habitats, are not considered to occur in the project area. The once common gray wolf and grizzly bear are presently believed to appear with such extreme infrequency that they, too, are precluded from any anticipated impacts. Under these premises and following personal communications and literature review, it is determined that implementation of the proposed action will have no effect on any of these ten species. The remaining two in need of consideration are the threatened bald eagle and the endangered peregrine falcon.

Bald Eagle

Analysis

Bald eagles most commonly occur in the immediate project vicinity as migrants and winter residents. The general area also contains three nesting pairs nearer the Clark Fork River, the closest of these being some 10 k. (6 mi.) southwest of this project. Eagle presence can be expected along the Morris Creek drainage as the birds occasionally forage a number of miles away from the main river corridor.

Potential Impacts

Due to location and the limited project scope, very little if any impact is expected to bald eagles. MDT presently anticipates no utilities relocations, nor should the minimal loss of low function and value wetlands substantially alter eagle foraging opportunities.

Recommended Mitigation and Coordination Measures

Because of the absence of utilities, thus relocations, no measures for raptor-proofing are being recommended at this time. However, any unforeseen or future involvement should require the implementation of such suitable raptor protection as outlined in Raptor Research Report No. 4 (Raptor Research Foundation, 1981).

Minimization of riparian and wetland losses through the use of best construction practices can also indirectly benefit not just eagles, but other raptors, by favoring the many species on which these larger birds prey.

At present, Highway 271's deer-kill is not perceived as a substantial problem yet any removal of carcasses from along the roadway by county maintenance personnel would further reduce the risk of imperilment for foraging raptors.

Determination of Effects

Based on the above analysis and discussion of potential impacts, it is determined that implementation of the proposed action is **not likely to adversely affect** the bald eagle.

Peregrine Falcon

Analysis

Fostered by recovery programs begun in the 1970's, the peregrine falcon continues to be a traditional resident of the Intermountain West. And although historic peregrine eyries have never been recorded within the Morris Creek drainage, suitable habitat does occur along the nearby Clark Fork corridor. Accordingly, the bird's presence is believed to be transitory for the immediate project vicinity with foragings probable among its riparian and wetland habitats.

Potential Impacts

Though not presently proposed, any relocation of powerlines without raptor-proofing could present risks of electrocution.

Recommended Mitigation and Coordination Measures

For peregrines, no requirements for raptor-proofing are necessary at this time; and any minimization of riparian losses would again favor their potential foraging habitats.

Similar efforts regarding area wetlands are also encouraged although the possible loss of 0.4 hectare (1.0 acre) of low quality wetland is not perceived as a threat to peregrine foraging opportunities in the drainage.

Determination of Effects

Based on the above analysis it is determined that implementation of the proposed action is **not likely to adversely affect** the peregrine falcon.

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Referenced Species

Common Name	Genus and Species
Fauna	
Accipiters	*G. Accipiter*
American kestrel	*Falco sparverius*
Bald eagle	*Haliaeetus leucocephalus*
Black bear	*Ursus americanus*
Black-footed ferret	*Mustela nigripes*
Bobcat	*Lynx rufus*
Bull trout	*Salvelinus confluentus*
Coyote	*Canis latrans*
Golden eagle	*Aquila chrysaetos*
Gray wolf	*Canis lupis*
Grizzly bear	*Ursus arctos horribilis*
Interior least tern	*Sterna albifrons*
Mallard duck	*Anas platyrhynchos*
Merlin	*Falco columbarius*
Mink	*Mustela vison*
Moose	*Alces alces*
Mountain lion	*Felis concolor*
Mule deer	*Odocoileus hemionus*
Muskrat	*Ondatra zibethica*
Osprey	*Pandion haliaetus*
Pallid Sturgeon	*Schaphirhynchus albus*
Peregrine falcon	*Falco peregrinus*
Piping plover	*Charadrius melodus*
Red-tailed hawk	*Buteo jamaicensis*
Rocky Mountain elk	*Cervus elaphus*
Rough-legged hawk	*Buteo lagopus*
Swainson's hawk	*Buteo swainsoni*
Turkey vulture	*Cathartes aura*
Westslope cutthroat trout	*Onchorynchus clarki lewisi*
White sturgeon	*Acipenser transmontanus*
White-tailed deer	*Odocoileus virginianus*
Whooping crane	*Grus americana*

Common Name	Genus and Species
Flora	
Bluegrass sp.	*Poa sp.*
Buffaloberry	*Sheperdia canadensis*
Canada thistle	*Cirsium arvense*
Common houndstongue	*Cynoglossum officinale*
Common juniper	*Juniperis communis*
Creeping juniper	*Juniperis horizontalis*
Douglas fir	*Pseudotsuga menziesii*
Elk sedge	*Carex geyeri*
Flannel-leaved mullein	*Verbascum thapsus*
Gooseberry sp.	*Ribes sp.*
Kinnickinnick	*Arctostaphylos uva-ursi*
Missoula phlox	*Phlox kelseyi var. missoulensis*
Mustard sp.	*Brassica sp.*
Nuttall's Townsend daisy	*Townsendia Nuttallii*
Quaking aspen	*Populus tremuloides*
Red-osier dogwood	*Cornus stolonifera*
Rocky Mountain juniper	*Juniperis scopulorum*
Rosy pussytoes	*Antennaria rosea*
Sedge sp.	*Carex sp.*
Smooth brome	*Bromus inermis*
Snowberry	*Symphoricarpos albus*
Spotted knapweed	*Centaurea maculosa*
Streambank willow	*Salix exigua*
Ute ladie's tress orchid	*Spiranthes diluvialis*
Water howellia	*Howellia aquatilis*
Wheatgrass sp.	*Agropyron sp.*
Wild (red) raspberry	*Rubus idaeus*
Willow sp.	*Salix sp.*
Woods rose	*Rosa woodsii*

Attachment 1.1 - Wetland Finding

Drummond North
Wetland Finding

Introduction

This wetland finding was prepared for the Montana Department of Transportation's (MDT) proposed improvements to 3.83 kilometers (2.38 miles) of secondary Highway 271 in Granite County, between Interstate 90 and the Powell County line to the north (Figure 1). The improvements include resurfacing the existing roadway, upgrading a section of guardrail, and straightening two curves.

The purpose of this study was to assess the presence and extent of any wetland areas that may be impacted by the proposed improvements.

On 3 December 1995, a field assessment of Waters of the US, including wetlands, associated with the study area and the proposed roadway improvement project was conducted.

In-house research provided the assessment team with the following resources: USGS 7.5-minute Limestone Ridge topographic quadrangle; soil information from the Natural Resources Conservation Service (NRCS) in the form of loose, mapped soil sheets and computerized data regarding each mapped soil type from the, as yet, unpublished soil survey for Granite County, Montana; botanical field guides for that area of Montana (see bibliography); and the National List of Plant Species That Occur in Wetlands: Northwest (Region 9) (USFWS, 1988). In addition, MDT provided: the preliminary field copy of the horizontal plan layout sheet and cross section for the proposed roadway construction; a Preliminary Field Review Report (dated 6 April 1995); and a Scope of Work Report (dated 22 November 1995).

A general reconnaissance was made of the study corridor to ascertain the terrain, the basic vegetation communities, the hydrological scheme, and the land use. The study corridor was analyzed for wetlands according to the USCE 1987 Wetland Delineation Manual (Manual).

The wetland findings for the Drummond North roadway improvement project are documented by site photographs and Attachment 1.3 which includes completed USCE data sheets, and completed MDT Wetland Site Evaluation Forms (rev. June 22, 1994).

The locations of the wetland areas are noted on Figure 3. There was no staking or surveying of wetlands. The extent of a wetland areas was determined by one or more of the following methods: measurement with a 30-meter (100-foot) tape; "stepping

off" the distances and averaging the results; measuring from the edge of pavement to landmarks or fences that were noted on the construction plans.

It should be noted that the time of year of the site visit was neither ideal nor recommended by the USCE Manual for accuracy of wetland analysis and plant classification. There was occasional light snow cover, most standing water had an ice layer, in some areas the soil was frozen, and the majority of the remaining vegetation was brown or dormant. However, conditions were not deemed severe enough to warrant rescheduling the field study.

Site Description

Location

Secondary Highway 271 is a gravel-topped, two-lane road extending north from Interstate 90 just east of Drummond, Montana. The road approximately parallels Morris Creek for approximately six miles through mountainous terrain of the Garnet Range. The project segment of Secondary 271 begins at KM 7.89 (MP 4.90) (sta 181+00), approximately 5.47 kilometers (3.4 miles) north of Interstate 90, and extends northerly to the county line at Km 11.72 (MP 7.28) (sta 309+63). Morris Creek is an intermittent stream, culverted under Highway 271 at three locations along the 3.83-kilometer (2.38-mile) long study corridor.

The terrain is predominantly mountainous with 9.0- to 12.0-meter (30- to 40-foot) high rock formations adjacent to the roadway. The mountains in this region are heavily wooded. Nearer the northern end of the study corridor are open, rolling pastures.

Waters of the US

Morris Creek, is a narrow, shallow, intermittent creek that, for the most part follows a rocky substrate or cut bank channel. Such areas do not qualify as wetlands. They are, however, Waters of the United States and fall under USCE jurisdiction. Dredging or filling such Waters requires a permit under Section 404 of the Clean Water Act. Photo A illustrates a non-wetland portion of Morris Creek.

Wetlands

The terrain through the project corridor is fairly steep and generally rocky, offering few places for the development of wetlands. In some areas, a flatter terrain, loamy soils,

and natural hydrology have combined to produce wetland conditions, that is, allow for the growth of hydrophytic plants. In these areas, the vegetation is dominated by the typical invader species of this area. In areas near pastures, the vegetation is predominantly grasses and/or sedges (*Carex* sp.) In other places, the vegetation is dominated by willow saplings (*Salix* spp.) and/or red-osier dogwood (*Cornus stolonifera*, FACW).

Soils

None of the soils mapped for the study area are classified as hydric by the NRCS. In cases where man-induced changes have altered the hydrology of an area and wetland development occurs, the soils may be assumed to be hydric under Section F, Subsection 4 of the USCE 1987 Manual.

Site No. 1

Site No. 1 (Photos B and C) is a depressional area effectively bermed by Secondary Highway 271 and an elevated ranch road to the west. There is a culvert under the ranch road providing an inlet for runoff to enter the depression. The depression drains south into the roadside drainage ditch. This bowl-like depression had 90-100% grass cover. Recognizable vegetation included reed canary grass (*Phalaris arundinacea*), sedge (*Carex*), and path rush (*Juncus tenuis*) and/or colorado rush (*J. confusus*). The soil was mapped and confirmed as Fergus loam, a non-hydric soil. The bermed and depressional nature of the site, as well as the obvious water source, have provided this area with enough hydrology for wetland development.

Site No. 1 is a wetland meadow, approximately 0.08 hectare (0.2 acre) in size, in a depression that may hold water during certain times of the year. A USCE data sheet and an MDT Wetland Evaluation Form have been completed for Site No. 1.

Site No. 2

Site No. 2 (Photos D and E) is the point where Morris Creek crosses Secondary 271 for the first time in the northern portion of the study corridor. Morris Creek turns west and is culverted under the road. On the west side of the road, fairly level terrain and a sharp turn of the creek to the south have allowed a small *Carex*-dominated floodplain to develop, mostly outside of the existing right-of-way fenceline.

This floodplain wetland is less than 0.1 acre along Morris Creek. A USCE data sheet was completed for Site No. 2. One MDT Wetland Evaluation Form was completed for Site Nos. 2, 3, and 4 because they are all similar wetlands within the study corridor.

Site No. 3

Site No. 3 (Photo F) is a cut bank drainage on the east side of 271 with a vegetated, wetland fringe ranging in width from 0 to 2.4 meters (0 to 8 feet). The channel breaks into braided drainages east of the right-of-way fence. Sedges were the dominant vegetation along the meandering creek. The soil is mapped as Roy-Shawmut-Danvers complex, all non-hydric soils.

Site No. 3 is essentially a wetland floodplain, approximately 0.04 hectare (0.1 acre), along Morris Creek, which qualifies as a Waters of the US. The wetland area borders the creek outside of the right-of-way fence. A USCE data sheet was completed for Site No. 3. One MDT Wetland Evaluation Form was completed for Site Nos. 2, 3, and 4 because they are all similar wetlands within the study corridor.

Site No. 4

Site No. 4 is a wetland fringe that has developed on both banks of Morris Creek as it flows parallel to and east of Secondary 271. This area is a fairly level, linear strip of land between the road and the mountain slope. The creek channel is approximately 0.6 to 0.9 meters (2 to 3 feet) wide and a foot or less deep, with a cobble substrate. The vegetation is dominated by red-ossier dogwood and sedge. Although the soil here is not classified as hydric, it is supporting hydrophytic vegetation and is influenced by wetland hydrology.

Site No. 4 is a less than 0.04 hectare (0.1 acre) wetland fringe bordering Morris Creek, which qualifies as Waters of the US. A USCE data sheet was completed for Site No. 3. One MDT Wetland Evaluation Form was completed for Site Nos. 2, 3, and 4 because they are all similar wetlands within the study corridor.

Site No. 5

Site No. 5 (Photos G and H) is an area that was apparently excavated and reworked during the initial road construction. Morris Creek was rechannelized through this section, west of the road. The terrain levels out enough between the road and the rock formations to slow the creek's flow and allow overbank flooding to saturate the

gravelly loam. Invader species such as red-ossier dogwood (*Cornus stolonifera*), wild rose, brome grass, bristle grass, and panic grass were observed at this site. This assemblage is not indicative of a wetland, although red-ossier dogwood is classified as FACW. The soil at this site is not classified as hydric, nor were any hydric soil indicators observed during the site visit.

Areas of non-hydric soil that are dominated by *C. stolonifera* are not considered jurisdictional in this region of Montana according to Hansen et al., 1995.

This portion of Morris Creek would be considered Waters of the US, but does not meet the three criteria for a wetland.

Referenced Plant Species

Scientific Name	Common Name	Region 9 Indicator Status
Bromus sp.	brome grass	4*: FAC+, FACU, NI, FACU-
Carex sp.	sedge	159*: 120 are FAC or wetter
Cornus stolonifera	red-ossier dogwood	FACW
Juncus confusus	colorado rush	FAC
Juncus tenuis	path rush	FAC
Panicum sp.	panic grass	4 *: all FAC or wetter
Phalaris arundinacea	reed canary grass	FACW
Rumex crispus	curly dock	FACW
Salix sp.	willow	46 *: 41 are FAC or wetter
Secale cereale	rye	Not listed (Upland)
Setaria sp.	bristle grass	4*: FAC, FACU, 2 are NI
Solidago sp.	goldenrod	8*: 2 are FAC or wetter
Thuja plicata	western redcedar	FAC

** Number of species listed in Reed, 1988*

NOTE: This plant list was compiled during the site visit in December, after a winter freeze and light snow. Ideally, vegetation analysis and dominance assessment are done during the growing season.

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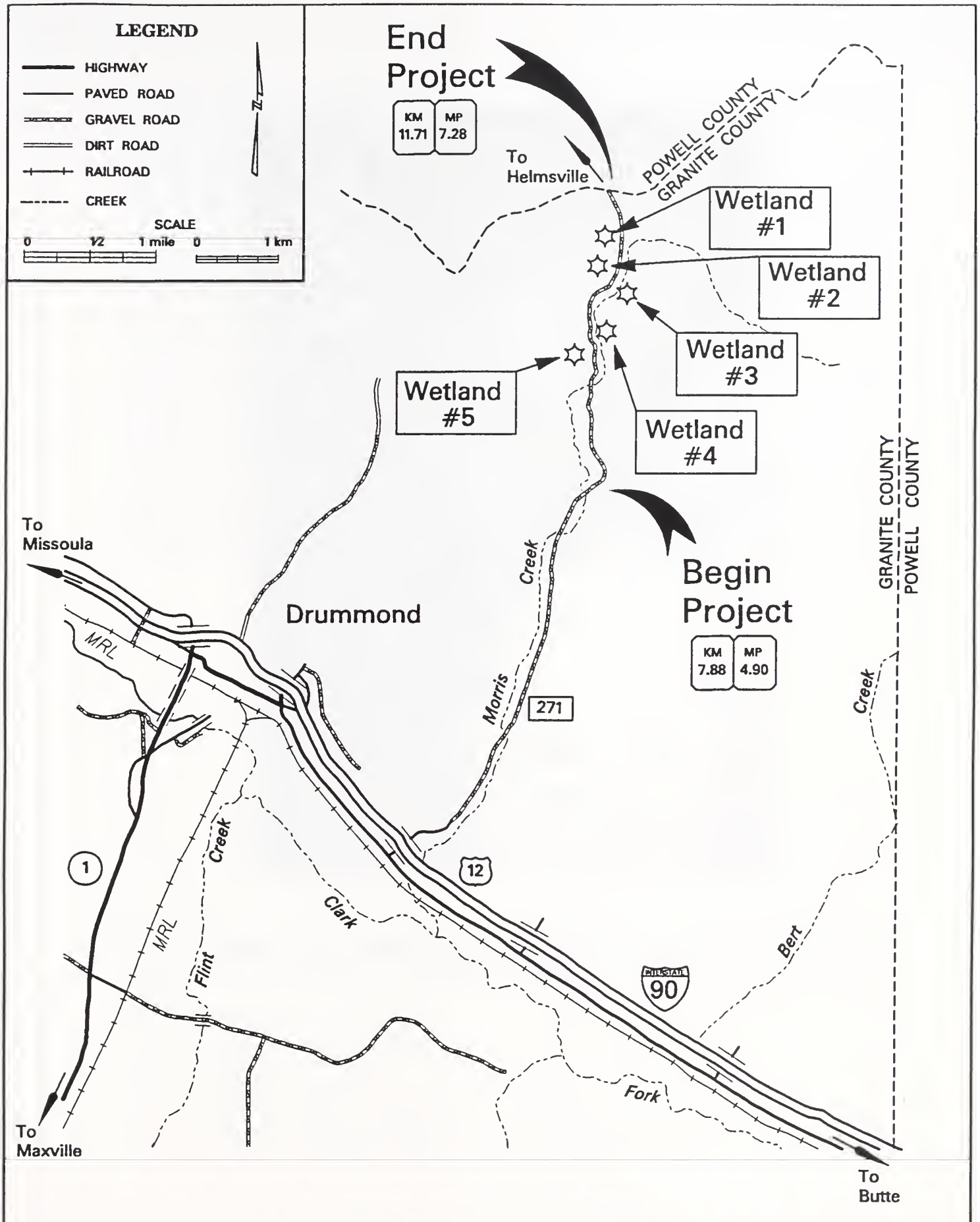

Drummond North

WETLAND LOCATIONS
Figure 3

PHOTO A: NONWETLAND PORTION OF MORRIS CREEK, WEST SIDE OF SECONDARY HIGHWAY 271

PHOTO B: SITE NO. 1 - FACING SOUTHWEST ACROSS WETLAND DEPRESSION TO CULVERT UNDER RANCH ROAD

PHOTO C: SITE NO. 1 - FACING NORTHWEST ACROSS WETLAND DEPRESSION TO ELEVATED RANCH ROAD

PHOTO D: SITE NO. 2 - FACING NORTH AT POINT WHERE MORRIS CREEK IS CULVERTED UNDER SECONDARY 271

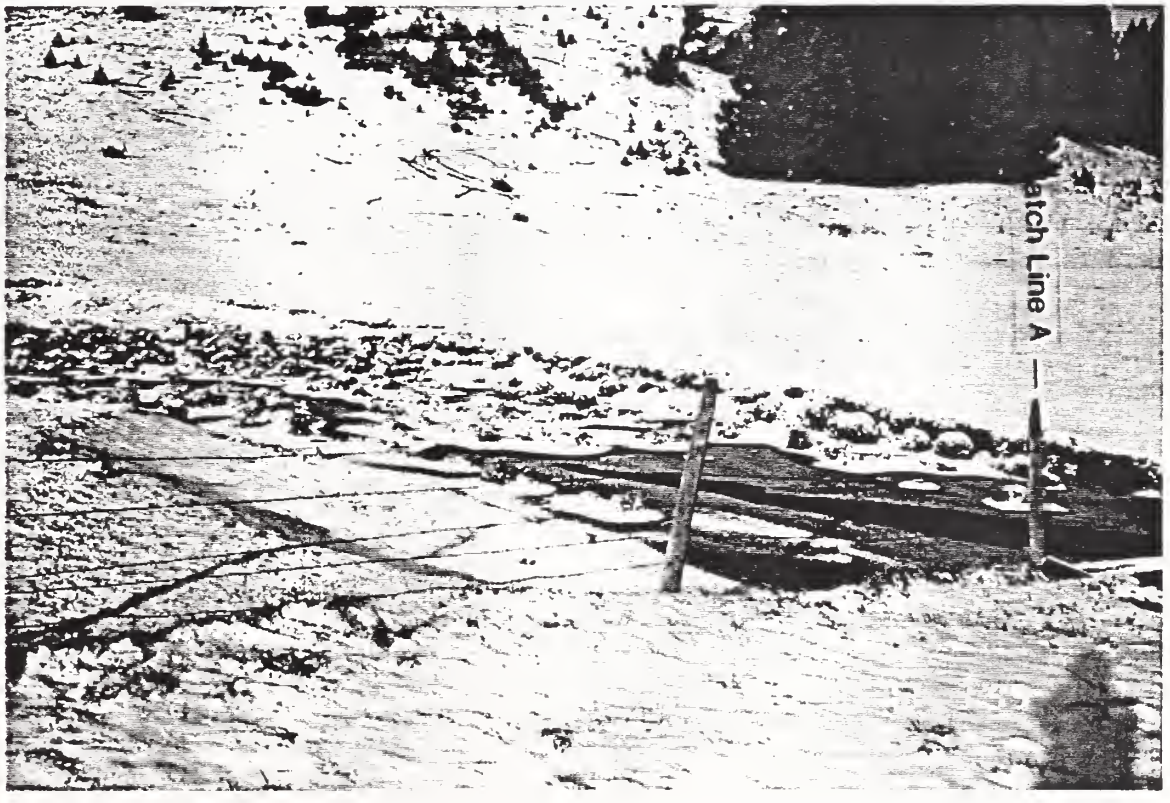

PHOTO E: SITE NO. 2 - FACING NORTHWEST TO SEDGE WETLAND AROUND MORRIS CREEK, JUST BEYOND RIGHT-OF-WAY FENCE

PHOTO F: SITE NO. 3 FACING NORTHEAST TO SEDGE WETLAND ALONG MORRIS CREEK, EAST OF SECONDARY HIGHWAY 271 AND OUTSIDE OF RIGHT-OF-WAY FENCE

PHOTO G: SITE NO. 5: **NON-WETLAND** VEGETATED BORDER ALONG MORRIS CREEK ON WEST SIDE OF SECONDARY HIGHWAY 271

PHOTO H: SITE NO. 5 - CLOSEUP OF ABOVE SHOWING MORRIS CREEK WITH COBBLE SUBSTRATE AND RED-OSSIER DOGWOOD SHRUBS

Attachment 1.2 - Approximate Wetland Boundaries on Preliminary Design Plans

STATE	PROJECT NUMBER	SHEET NO.
MONTANA	STPS 271 - 1(515	10

DRUMMOND NORTH

MONTANA DEPARTMENT OF TRANSPORTATION

DRPLMI.DGN MISSOULA

2975

MONTANA CADD

PRELIMINARY

SEC. 22 70 SEC. 15

69 71 72 73 74 75 76

PI 70+19.6

Wetland #4

EX. R/W = R/W

24.38m 15.24m

N 18° 22' 07" W

N 24° 09' 53" E

STA. 69+87.8

PC 69+85.6

STAKED
PI= 70+19.6
Δ= 42°32'00" RT.
R= 87.325m

PT 70+50.4

PC 70+79.3

STAKED
PI= 71+65.9
Δ= 89°33'00" LT.
R= 87.325m

PT 72+15.8

PI 72+49.5

N 65° 23' 07" W

PC 72+16.0

PT 72+80.0

72+84.7 R/W

STAKED
PI= 72+49.5
Δ= 41°57'00" RT.
R= 87.325m

PI 71+65.9

T. 11 N. R. 12 W.

STA. 72+87.96
1324m ACSP (M PLACE
NEW PETS LT. & RT.

PI 73+60.9

N 23° 26' 07" W

17.19m

PC 73+45.1

PT 73+76.4

STAKED
PI= 73+60.9
Δ= 20°30'00" RT.
R= 87.325m

STAKED
PI= 74+85.6
Δ= 14°55'00" LT.
R= 97.018m

PC 74+72.9

PT 74+98.2

N 2° 56' 07" W

N 17° 51' 07" W

EX. R/W = R/W

PT 74+85.6

PI 75+63.2

PC 75+44.0

PT 75+82.0

STAKED
PI= 75+63.2
Δ= 17°26'30" RT.
R= 124.753m

69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00

1480 1478 1476 1474 1472

1490 1488 1486 1484 1494 1492 1490

1506 1504 1502 1500 1498

63+70.32 TO 71+32.32 A-2-4(10)

TO+86.54 TO 71+32.28
RANDOM RIPRAP CL E LT.

71+32.32 TO 79+24.80 A-1-a(0)

71+47.36
A-1-a(0)
DEPTH= 1.32+m

PROFILE GRADE =
EX. GRND. PLUS
OVERLAY THICK. 0.285m

7343.07 TO 74+86.58
RANDOM RIPRAP CL E RT.

121.82

152.4m NEW GUARDRAIL RIGHT.

132.55

PROFILE GRADE =
EX. GRND. PLUS
OVERLAY THICK. 0.285m

STATE	PROJECT NUMBER	SHEET NO
MONTANA	STPS 271-1(5)5	
	DRUMMOND NORTH	

PI 77+34.9

PI 78+76.3

N 28° 50' 23" E

N 0° 24' 37" W

Ex. R/W = R/W

15.24m

9m R/W

Ex. R/W = R/W

Wetland #3

PC 77+09.6

PT 77+59.1

PC 78+45.8

PT 79+04.5

N 67° 21' 23" E

STAKED
PI = 77+34.9
Δ = 29° 15' 00" RT.
R = 97.018m

STAKED
PI = 78+76.3
Δ = 38° 31' 00" RT.
R = 87.325m

PC 80+42.0

STAKED
PI = 80+82.0
Δ = 44° 49' 30" LT.
R = 97.018m

PT 81+16.2 BK =
81+47.8 AH

PC 82+44.1

N 22° 31' 53" E

15.24m

12.19m

Ex. R/W = R/W

PI 80+82.0

STA. 81+17.88
FARM FIELD APP. LEFT
KEY 450mm X 24.8m PIPE
RACET LT. & RT.

STA. 82+60.64
SIDE STR. PL. LT. & RT.
KEY 900mm X 3.1m RT.
METAL PIPE 3.1m LT. & RT.
PETS LT. & RT.

82+44.1 R/W

PRELIMINARY

DRPLM2.DGN

2975

MISSOULA

MONTANA CADD

79+00

STA. 79+24.74 END OVERLAY
BEGIN TRANS. TO OVERLAY
WITH ROCK CAP ELEV. 1510.82

+39.98

TS+24.74 TO 80+41.97
245 m RANDOM RIPRAP CL. 2

79+39.98 TO 82+29.54 289.56m NEW GUARDRAIL RIGHT

81+17.86 LEFT
FARM FIELD APPROACH

PROFILE GRADE =
EX. GRND. PLUS
OVERLAY WITH ROCK
CAP THICK. 0.550m

+25.54

STA. 79+55.22 END TRANS
TO OVERLAY WITH ROCK CAP
BEG. OVERLAY WIT ROCK CAP
ELEV. 1511.88

80+77.80
A-2-6(0)
DEPTH = 1.524m

100.64

81+16.2 BK. = ELEV. = 29.6m
81+47.8 AH.

PROFILE GRADE =
EX. GRND. PLUS
OVERLAY THICK. 0.285m

77+03.82
A-1-a(0)
DEPTH = 1.524m

77+32.32 TO 79+24.80 A-1-a(0)

TS+24.80 TO 85+34.40 A-2-6(0)

1520
1518
1516
1514
1512
1510
1508
1506
1504
1502

76+00 77+00 78+00 79+00 80+00 81+00 82+00 83+00

STATE	PROJECT NUMBER	SHEET NO
MONTANA	STPS 271-1(515)	12
	DRUMMOND NORTH	

MONTANA DEPARTMENT OF TRANSPORTATION

T. 11 N. R. 12 W.

83 84 85 86 87 88 89 90

TEL.

STAKED
PI= 83+32.0
Δ= 22°45'30" LT.
R= 436.626m

PT 84+17.6

TEL PED

TEL PED

PC 88+31.7
R/W

STAKED
PI= 89+55.8
Δ= 24°04'00" LT.
R= 582.168m

Wetland #1

EX. R/W = R/W
12.19m

15.24m

EX. R/W = R/W
21.34m

N 0° 13' 37" E 42.19m

N 0° 13' 37" E

53° E

PI 83+32.01

PI 89+55.8

STA. 83+97.24
FARM FIELD APP. RIGHT
MEB 450mm X 15.2m PIPE
RACEY LT. & RT.

STA. 85+03.92
2.13m CSP SW PLACE
MEB 450mm X 17.4m CSP
PETS LT. & RT.

STA. 87+03.56
FARM FIELD APP. LEFT
MEB 450mm X 27.8m PIPE
RACEY LT. & RT.

STA. 89+06.34
FARM FIELD APP. RIGHT
MEB 450mm X 24.8m PIPE
RACEY LT. & RT.

PRELIMINARY

DRPLM2.DGN MISSOULA

2975

MONTANA CADD

83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00

1528 1526 1524 1522 1520 1518

1536 1534 1532 1530 1528 1540 1538 1536 1534 1532

1550 1548 1546 1544 1542 1540

87+03.56 LEFT
FARM FIELD APPROACH

89+06.34 RIGHT
FARM FIELD APPROACH

PROFILE GRADE =
EX. GRND. PLUS
OVERLAY WITH ROCK
CAP THICK. 0.390m

84+42.96
A-1-a(0)
DEPTH = 1.524m

88+66.80
A-7-6(15)
DEPTH = 1.524m

89+81.6
A-2-7(2)
DEPTH = 1.524m

79+24.80 TO 85+34.40 A-2-6(0)

85+34.40 TO 88+39.20 A-7-6(15)

88+39.20 TO 94+18.32 A-2-7(2)

403.92

Attachment 1.3 - COE Routine Wetland Delineation Forms and MDT Wetland Site Evaluation Forms

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: DRUMMOND NORTH Applicant/Owner: MONTANA DoT Investigator: PATRICIA McCOY & JEREMY KEENE	Date: 12-3-95 County: GRANITE State: MONTANA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: Site No. 1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Phalaris arundinacea	Herb	FACW	9.		
2. Carex sp.	Herb	*	10.		
3. Juncus confusus or tenuis	Herb	FAC	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). >50%

Remarks: >50% of vegetation species classified as hydrophytic.

* Carex - out of 159 spp. listed in USFWS (Reg. 9), 120 are FAC or wetter.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: NA (in.)

Depth to Free Water in Pit: NA (in.)

Depth to Saturated Soil: surface (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: This is a depressional area effectively bermed by Secondary Hwy 271 and an elevated ranch road to the west. There is a culvert under the ranch road providing an inlet for runoff to enter the depression. The depression drains south into the roadside drainage ditch.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: DRUMMOND NORTH Applicant/Owner: MONTANA DOT Investigator: PATRICIA McCOY, JEREMY KEENE	Date: 12-3-95 County: GRANITE State: MONTANA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: Site No. 2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Carex sp.	Herb	*	9.		
2. unknown forb	Herb	—	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). >50% (best professional judgement)

Remarks:

* Carex: of 159 spp. listed in USFWS (Reg. 9), 120 are FAC or wetter.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: NA (in.)

Depth to Free Water in Pit: NA (in.)

Depth to Saturated Soil: surface (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: This is where Morris Creek turns west and is culverted under Hwy 271. Fairly level terrain and a sharp turn of the c to the south have allowed a small Carex-dominated floodpl to develop, mostly outside of existing MDT ROW.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: DRUMMOND NORTH Applicant/Owner: MONTANA DOT Investigator: PATRICIA McCOY, JEREMY KEENE	Date: 12-3-95 County: GRANITE State: MONTANA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: _____ Transect ID: _____ Plot ID: SITE NO. 3

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Carex sp.	Herb	*	9.		
2. Salix sp.	Herb	–	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). >50% (best professional judgement)

Remarks:

* Carex - out of 159 spp. listed in USFWS (Reg. 9), 120 are OBL, FACW or FAC or Wetter

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: NA (in.)

Depth to Free Water in Pit: NA (in.)

Depth to Saturated Soil: surface (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: A more level area in this mountainous terrain has allowed the water in Morris Creek to slow and form a sedge-dominated floodplain adjacent to road.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: DRUMMOND NORTH	Date: 12- -95
Applicant/Owner: MONTANA DOT	County: GRANITE
Investigator: PATRICIA McCOY, JEREMY KERNE	State: MONTANA
Do Normal Circumstances exist on the site? Yes No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes No	Transect ID:
Is the area a potential Problem Area? Yes No (If needed, explain on reverse.)	Plot ID: SITE NO. 4

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Cornus stolonifera	SHRUB	FACW	9.		
2. Rumex crispus	HERB	FACW	10.		
3. Carex sp.	HERB	*	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). >50%

Remarks: >50% of dominant species are hydrophytic.

*Carex: of 159 spp. listed by USFWS (Reg. 9), 120 are FAC or wetter.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: NA (in.)

Depth to Free Water in Pit: NA (in.)

Depth to Saturated Soil: surface (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: This area, adjacent to road, was probably reworked to realign Morris Creek during initial road development. A fairly level area in an otherwise mountainous terrain has allowed a floodplain (shrubby) wetland to develop.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: DRUMMOND NORTH	Date: 12-3-95
Applicant/Owner: MONTANA DOT	County: GRANITE
Investigator: PATRICIA McCOY & JEREMY KEENE	State: MONTANA
Do Normal Circumstances exist on the site? (Yes) No	Community ID:
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: SITE NO. 5
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Cornus stolonifera	Shrub	FACW	9.		
2. Bromus sp.	Herb	-	10.		
3. Panicum sp.	Herb	-	11.		
4. Rosa sp.	Shrub	-	12.		
5. Setaria sp.	Herb	-	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). < 50% - best professional judgement

Remarks: Recent freezes and a light snow made plant identification difficult.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: NA (in.)

Depth to Free Water in Pit: NA (in.)

Depth to Saturated Soil: surface (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: A linear area (~60' X 400') between the road and the mountain has provided level ground for a floodplain area adjacent to Morris Creek. Morris Creek at this point is 1-2 feet wide, <1 ft deep, with a rocky substrate.

(Revised June 22, 1994)

Project Name: DRUMMOND NORTH Number: SECONDARY HWY 271

Evaluation Date: 12-3-95 Evaluator(s): PATRICIA McCOY JEREMY KEENE Site Name(s): SITE Nos. 2, 3, & 4.

Site Location: FOUR LOCATIONS ALONG SECONDARY 271 (see location map.)
EACH SITE IS ≤0.1

Estimated Total Wetland Size: acre Estimated Size Within Proposed ROW:

Conditions During Evaluation: Below freezing, light snow cover.

Wetland Classification (from MDT Wetland Classification Scheme)

Water Regime (e.g., Permanently flooded)	Wetland Type (e.g., Marsh)	Dominant Species	Modifier (e.g., Impounded) and/or Descriptor	% of Wetland
Interm. exposed	Aquatic channel	(unvegetated)	cobble substrate	
Saturated	Wet meadow/shrub	Carex sp.	Riparian	
		Cornus stolonifera		

Wetland Type(s) is (are) locally (circle): Rare (Common) Abundant

Brief Descriptive Summary: These four sites all represent small floodplain wetlands that developed in fairly level, gravelly loamy soils in otherwise mountainous, rocky terra

Functions and Values Assessment

1. Wetland Size (All size criteria throughout the assessment refer to the size of the entire wetland.)

Size	Score
> 10 acres	=10
6 to 10 acres	=5
1 to 5 acres	=3
< 1 acre	(=1)

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	(Low)	(=1)
3 =	Moderate	=3
5 =	High	=5
10 =	Except.	=10

2. Habitat Diversity (Function of wetland type diversity and presence of open water component.)

# of Wetland Types (not including open water types)	(↓ Multiply ↓) Score	Score	Open Water
≥ 3 types	=5	(2=)	Present (when creek flows)
2 types	=3	1=	Absent
≤ 1 type	(=1)		

Calculated Score = 2

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	=1
2-3 =	(Moderate)	(=3)
5-6 =	High	=5
10 =	Except.	=10

3. Food Chain Support (Function of habitat diversity (HD) and wetland size)

HD Rating (from #2 above)	(↓ Multiply ↓) Score	Score	Size
Low	=1	5=	> 5 acres
Moderate	=2	3=	1-5 acres
High	(=3)	(1=)	< 1 acre
Exceptional	=4		

Calculated Score = 3

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	=1
3-9 =	(Moderate)	(=3)
10-15 =	High	=5
20 =	Except.	=10

4. Habitat for Federally-listed Endangered, Threatened, Proposed, or Candidate (C1 or C2) Species

Wetland Receives:	Score
Regular use by such species or is designated critical habitat	=10
Occasional use (e.g., infrequent, sporadic use)	=5
Incidental use (e.g., chance, inconsequential use)	=3
No known or suspected use	(=0)

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	(None)	(=0)
3 =	Moderate	=3
5 =	High	=5
10 =	Except.	=10

5. Habitat for Species Rated "S1", "S2", or "S3" by the Montana Natural Heritage Program (Not including those addressed under #4 above.)

Wetland Provides:	Score
Breeding or other crucial habitat	=10
Habitat that is used regularly	=5
Habitat that is used occasionally (e.g., infrequent, sporadic use)	=3
Habitat that is used incidentally (e.g., chance, inconsequential use)	=1
No known or suspected habitat	(=0)

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	(None)	(=0)
1 =	Low	=1
3 =	Moderate	=3
5 =	High	=5
10 =	Except.	=10

6. General Wildlife & Fish Habitat (Non-T&E)

Criteria I (apply to each group)			Criteria II (apply to entire group)	Score
...ntial or significant use	= S	M Songbirds	≥ 6 S's or ≥ 8 M's	= 10
...ional or moderate use	= M	L Raptors	3-5 S's or 6-7 M's	= 5
Little or no perceived use	= L	L Waterfowl	1-2 S's or 3-5 M's	= 3
		L Marsh & Shorebirds	No S's and ≤ 2 M's	= 1
		M Rodents & Insectivores		
		L Carnivores		
		M Ungulates	Calculated Score = 3	
		L Herpdiles		
		L Fish		
		M Invertebrates		

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5
10 =	Except.	= 10

7. Flood Control & Storage (Function of floodwater proximity, wetland size, vegetative composition, and flow restriction; Applies only to sites within a discernable floodplain [based on floodwater proximity, flood deposits, FEMA maps, etc.]; If does not apply, Point Value is 0.)

A. Wetland Size	(1 Multiply 1) Score	Score	Vegetative Composition
> 5 acres	= 5	3 =	> 50% forested or shrub or combination
1-5 acres	= 3	2 =	10-50% forested or shrub or combination
< 1 acre	= 1	1 =	< 10% forested or shrub or combination

8. Flow Restriction	Score
Outlet restricted or absent	= 2
Outlet unrestricted	= 1

Calculated Score (A + B) = _____

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	= 0
2-3 =	Low	= 1
4-8 =	Moderate	= 3
10-16 =	High	= 5
17 =	Except.	= 10

8. Sediment Filtration and Water Purification (Function of proximity to potential sediment/pollutant source and emergent vegetative component.)

...elihood to Receive Sediment/Pollutants	(1 Multiply 1) Score	Score	Emergent Vegetative Component
...stantial accumulations evident or likely	= 2	5 =	> 50% emergent
Moderate accumulations evident or likely	= 1	3 =	10-50% emergent
Accumulations not evident and unlikely	= 0.5	1 =	< 10% emergent

Calculated Score = 0.5

Calcul. Score =	Rating (circle)	Point Value = (circle)
.5-1.5 =	Low	= 1
2-3 =	Moderate	= 3
5-10 =	High	= 5

9. Erosion Control (Flow or wave dissipation; applies only if site is on shoreline of lake [subject to wave action], river, stream, or other defined drainage; If does not apply, Point Value is 0.)

Size of Rooted Vegetative Component	Score
> 5 acres	= 5
1-5 acres	= 3
< 1 acre	= 1

Calculated Score = ∅

Calcul. Score =	Rating (circle)	Point Value = (circle)
0 =	None	= 0
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

10. Nutrient Cycling (Potential to accumulate, process, and export nutrients [expressed as organic matter].)

Organic Matter Accumulation	(1 Multiply 1) Score	Score	Proximity to Other Aquatic Habitats
Substantial accumulation evident	= 3	3 =	Adjacent or contiguous to other aquatic habitats
Little to no accumulation evident	= 1	1 =	Isolated basin

Calculated Score = 3

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
9 =	High	= 5

11. Groundwater Discharge/Recharge

Wetland:	Criteria	Score
...is a known discharge or recharge area occurs immediately below a dam	A, B, or C true	= 5
C. is a suspected discharge or recharge area due to: _____	D true, all others false	= 3
D. has an outlet, but no inlet	A-D false.	= 1

Calcul. Score =	Rating (circle)	Point Value = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

12. Uniqueness (Function of relative abundance of wetland type in Montana and replacement potential of ecological functions.)

Frequency of Occurrence in Montana	(1 Multiply 1) Score	Score	Replacement Potential
Rare	= 3	5 =	Irreplaceable ecological functions
Common	= 2	3 =	Ecological functions replaceable with difficulty
Abundant	= 1	1 =	Ecological functions readily replaceable

Calculated Score = 2

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	= 1
3-6 =	Moderate	= 3
9-10 =	High	= 5
15 =	Except.	= 10

13. Recreation/Education Potential (Subjective assessment of potential for boating, hunting, birdwatching, photography, and other recreation/education activities; remember to consider access restrictions.)

Recreation Potential	(1 Multiply 1) Score	Score	Education Potential
High	= 3	5 =	High
Moderate	= 2	3 =	Moderate
Low	= 1	1 =	Low

Calculated Score = 1

Calcul. Score =	Rating (circle)	Point Value = (circle)
1-2 =	Low	= 1
3-6 =	Moderate	= 3
9-15 =	High	= 5

Function & Value Summary and Overall Wetland Rating

for Wetland Site(s): SITES No. 2, 3, and 4 (DRUN)

Function & Value Parameters	Point Values	Ratings
1. Wetland Size	1	LOW
2. Habitat Diversity	3	MODERATE
3. Food Chain Support	3	MODERATE
4. T&E/Proposed/Candidate Species Habitat	ϕ	NONE
5. MNHP Species Habitat	ϕ	NONE
6. General Fish & Wildlife Habitat	3	MODERATE
7. Flood Control & Storage	3	MODERATE
8. Sediment Filtration	1	LOW
9. Erosion Control	ϕ	NONE
10. Nutrient Cycling	3	MODERATE
11. Groundwater Discharge/Recharge	1	LOW
12. Uniqueness	1	LOW
13. Recreation/Education Potential	1	LOW
TOTAL POINT VALUE	(20)	

Overall Wetland Rating (Circle appropriate category based on the criteria outlined below):

I II (III) IV

Category I Wetland - Must satisfy one of the following criteria:

- Total Point Value of 65 or more; or
- "Exceptional" ratings for T&E/Proposed/Candidate Species Habitat or Flood Control & Storage or Uniqueness.

Category II Wetland - Does not satisfy criteria for Category I and:

- Total Point Value of 40 - 64; or
- "Exceptional" ratings for MNHP Species Habitat or General Wildlife & Fish Habitat; or
- "High" ratings for Food Chain Support or Uniqueness.

Category III Wetland - Does not satisfy criteria for Category I, Category II, or Category IV.

Category IV Wetland - Does not satisfy criteria for Category I, Category II, or Category III and:

- Total Point Value less than 26; and
- "Low" ratings for Wetland Size and Habitat Diversity.

(Revised June 22, 1994)

Project Name: DRUMMOND NORTH Number: SECONDARY HWY 271

Evaluation Date: 12-3-95 Evaluator(s): PATRICIA McCOY, JEREMY KEENE Site Name(s): SITE No. 1

Site Location: At Sta. 290+00 on west side of 271

Estimated Total Wetland Size: ~0.2 acre Estimated Size Within Proposed ROW:

Conditions During Evaluation: Below freezing, light snow cover.

Wetland Classification (from MDT Wetland Classification Scheme)

Water Regime (e.g., Permanently flooded)	Wetland Type (e.g., Marsh)	Dominant Species	Modifier (e.g., Impounded) and/or Descriptor	% of Wetland
Saturated	Wet meadow	Carex sp.	Excavated basin	100%
(may be tempor. flooded - insufficient data)			Somewhat impounded (inlet & outlet)	
			Probably grazed	

Wetland Type(s) is (are) locally (circle): Rare Common (Abundant)

Brief Descriptive Summary: Man-induced hydrology / topography has resulted in depressional wet meadow.

Functions and Values Assessment

1. Wetland Size (All site criteria throughout the assessment refer to the size of the entire wetland.)

Site	Score
> 10 acres	=10
6 to 10 acres	=5
1 to 5 acres	=3
< 1 acre	(=1)

Calcul. Score =	Rating (circle)	Point Val = (circle)
1 =	(Low)	(=1)
3 =	Moderate	=3
5 =	High	=5
10 =	Except.	=10

2. Habitat Diversity (Function of wetland type diversity and presence of open water component.)

# of Wetland Types (not including open water types)	(1 Multiply 1) Score	Score	Open Water
≥ 3 types	=5	2 =	Present
2 types	=3	(1 =)	Absent
≤ 1 type	(=1)		

Calculated Score =

Calcul. Score =	Rating (circle)	Point Val = (circle)
1 =	(Low)	(=1)
2-3 =	Moderate	=3
5-6 =	High	=5
10 =	Except.	=10

3. Food Chain Support (Function of habitat diversity (HD) and wetland size)

HD Rating From #2 above)	(1 Multiply 1) Score	Score	Size
Low	(=1)	5 =	> 5 acres
Moderate	=2	3 =	1-5 acres
High	=3	(1 =)	< 1 acre
Exceptional	=4		

Calculated Score = 1

Calcul. Score =	Rating (circle)	Point Va = (circle
1-2 =	(Low)	(=1)
3-9 =	Moderate	=3
10-15 =	High	=5
20 =	Except.	=10

4. Habitat for Federally-listed Endangered, Threatened, Proposed, or Candidate (C1 or C2) Species

Wetland Receives:	Score
Regular use by such species or is designated critical habitat	=10
Occasional use (e.g., infrequent, sporadic use)	=5
Incidental use (e.g., chance, inconsequential use)	=3
No known or suspected use	(=0)

Calcul. Score =	Rating (circle)	Point V = (circle
0 =	(None)	(=0)
3 =	Moderate	=3
5 =	High	=5
10 =	Except.	=10

5. Habitat for Species Rated "S1", "S2", or "S3" by the Montana Natural Heritage Program (Not including those addressed under #4 above.)

Wetland Provides:	Score
Breeding or other crucial habitat	=10
Habitat that is used regularly	=5
Habitat that is used occasionally (e.g., infrequent, sporadic use)	=3
Habitat that is used incidentally (e.g., chance, inconsequential use)	=1
No known or suspected habitat	(=0)

Calcul. Score =	Rating (circle)	Point V = (circl
0 =	(None)	(=0)
1 =	Low	=1
3 =	Moderate	=3
5 =	High	=5
10 =	Except.	=10

6. General Wildlife or Fish Habitat (Non-T&E)

Criteria I (apply to each group)			Criteria II (apply to entire group)	Score
Substantial or significant use	= S	L Songbirds	≥ 6 S's or ≥ 8 M's	= 10
Occasional or moderate use	= M	L Raptors	3-5 S's or 6-7 M's	= 5
Little or no perceived use	= L	L Waterfowl	1-2 S's or 3-5 M's	= 3
		L Marsh & Shorebirds	No S's and ≤ 2 M's	= 1
(saw deer tracks)		M Rodents & Insectivores		
		L Carnivores		
		M Ungulates	Calculated Score = 3	
		L Herptiles		
		L Fish		
		Invertebrates		

Calcul. Score =	Rating (circle)	Point Val = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5
10 =	Except.	= 10

7. Flood Control or Storage (Function of floodwater proximity, wetland size, vegetative composition, and flow restriction; Applies only to sites within a discernable floodplain [based on floodwater proximity, flood deposits, FEMA maps, etc.]; If does not apply, Point Value is 0.)

	Wetland Site	Score	(1 Multiply 1) Score	Vegetative Composition
A.	> 5 acres	= 5	3 =	> 50% forested or shrub or combination
	1-5 acres	= 3	2 =	10-50% forested or shrub or combination
	< 1 acre	= 1	1 =	< 10% forested or shrub or combination

8. Flow Restriction	Score
Outlet restricted or absent	= 2
Outlet unrestricted	= 1

Calculated Score (A + B) = Ø

Calcul. Score =	Rating (circle)	Point Val = (circle)
0 =	None	= 0
2-3 =	Low	= 1
4-8 =	Moderate	= 3
10-16 =	High	= 5
17 =	Except.	= 10

8. Sediment Filtration and Water Purification (Function of proximity to potential sediment/pollutant source and emergent vegetative component.)

Likelihood to Receive Sediment/Pollutants	Score	(1 Multiply 1) Score	Emergent Vegetative Component
Substantial accumulations evident or likely	= 2	5 =	> 50% emergent
Moderate accumulations evident or likely	= 1	3 =	10-50% emergent
Accumulations not evident and unlikely	= 0.5	1 =	< 10% emergent

Calculated Score = 0.5

Calcul. Score =	Rating (circle)	Point Val = (circle)
.5-1.5 =	Low	= 1
2-3 =	Moderate	= 3
5-10 =	High	= 5

9. Erosion Control (Flow or wave dissipation; applies only if site is on shoreline of lake [subject to wave action], river, stream, or other defined drainage; if does not apply, Point Value is 0.)

Size of Rooted Vegetative Component	Score
> 5 acres	= 5
1-5 acres	= 3
< 1 acre	= 1

Calculated Score = Ø

Calcul. Score =	Rating (circle)	Point Val = (circle)
0 =	None	= 0
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

10. Nutrient Cycling (Potential to accumulate, process, and export nutrients [expressed as organic matter].)

Organic Matter Accumulation	Score	(1 Multiply 1) Score	Proximity to Other Aquatic Habitats
Substantial accumulation evident	= 3	3 =	Adjacent or contiguous to other aquatic habitats
Little to no accumulation evident	= 1	1 =	Isolated basin

Calculated Score = 1

Calcul. Score =	Rating (circle)	Point Val = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
9 =	High	= 5

11. Groundwater Discharge/Recharge

Wetland:	Criteria	Score
A. is a known discharge or recharge area	A, B, or C true	= 5
B. occurs immediately below a dam		
C. is a suspected discharge or recharge area due to: _____	D true, all others false	= 3
D. has an outlet, but no inlet	A-D false.	= 1

Calcul. Score =	Rating (circle)	Point Val = (circle)
1 =	Low	= 1
3 =	Moderate	= 3
5 =	High	= 5

12. Uniqueness (Function of relative abundance of wetland type in Montana and replacement potential of ecological functions.)

Frequency of Occurrence in Montana	Score	(1 Multiply 1) Score	Replacement Potential
Rare	= 3	5 =	Irreplaceable ecological functions
Common	= 2	3 =	Ecological functions replaceable with difficulty
Abundant	= 1	1 =	Ecological functions readily replaceable

Calculated Score = 1

Calcul. Score =	Rating (circle)	Point Val = (circle)
1-2 =	Low	= 1
3-6 =	Moderate	= 3
9-10 =	High	= 5
15 =	Except.	= 10

13. Recreation/Education Potential (Subjective assessment of potential for boating, hunting, birdwatching, photography, and other recreation/education activities; remember to consider access restrictions.)

Recreation Potential	Score	(1 Multiply 1) Score	Education Potential
High	= 3	5 =	High
Moderate	= 2	3 =	Moderate
Low	= 1	1 =	Low

Calculated Score = 1

Calcul. Score =	Rating (circle)	Point Val = (circle)
1-2 =	Low	= 1
3-6 =	Moderate	= 3
9-15 =	High	= 5

Function & Value Summary and Overall Wetland Rating

for Wetland Site(s): SITE NO. 1 (DRUN)

Function & Value Parameters		Point Values	Ratings
1.	Wetland Size	1	LOW
2.	Habitat Diversity	1	LOW
3.	Food Chain Support	1	LOW
4.	T&E/Proposed/Candidate Species Habitat	ϕ	NONE
5.	MNHP Species Habitat	ϕ	NONE
6.	General Fish & Wildlife Habitat	3	MODERATE
7.	Flood Control & Storage	ϕ	NONE
8.	Sediment Filtration	1	LOW
9.	Erosion Control	ϕ	NONE
10.	Nutrient Cycling	1	LOW
11.	Groundwater Discharge/Recharge	1	LOW
12.	Uniqueness	1	LOW
13.	Recreation/Education Potential	1	LOW
TOTAL POINT VALUE		11	

Overall Wetland Rating (Circle appropriate category based on the criteria outlined below):

I II III (IV)

Category I Wetland - Must satisfy one of the following criteria:

- Total Point Value of 65 or more; or
- "Exceptional" ratings for T&E/Proposed/Candidate Species Habitat or Flood Control & Storage or Uniqueness.

Category II Wetland - Does not satisfy criteria for Category I and:

- Total Point Value of 40 - 64; or
- "Exceptional" ratings for MNHP Species Habitat or General Wildlife & Fish Habitat; or
- "High" ratings for Food Chain Support or Uniqueness.

Category III Wetland - Does not satisfy criteria for Category I, Category II, or Category IV.

Category IV Wetland - Does not satisfy criteria for Category I, Category II, or Category III and:

- Total Point Value less than 26; and
- "Low" ratings for Wetland Size and Habitat Diversity.